



UNIVERSITI PUTRA MALAYSIA

**EFFICIENCY, PRODUCTIVITY AND FINANCIAL
PERFORMANCE IN THE YEMEN BANKING
INDUSTRY**

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By

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October 2010

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Prior to 1990, Yemen was divided into two parts: Yemen Arab Republic and the People's Democratic Republic of Yemen. In May 1990, the two parts were united to form the Republic of Yemen. At the beginning of 1995, the Yemeni government started ambitious plans to reform the financial and administrative sectors in all economic institutions, putting in place financial and monetary policies which set the bases for the development of Yemeni banking industry.

Through the next 19 years, the banking industry in Yemen has undergone a series of changes through financial reforms, advancement of communication and information technologies, globalization of financial services, and economic development.

Through the next 19 years, the banking industry in Yemen has undergone a series of changes through financial reforms, advancement of communication and information technologies, globalization of financial services, and economic development. These changes should have had a considerable effect on efficiency,

productivity change, and performance in the banking industry.

The motivation of this study is to investigate empirically the impact of these changes on the banking industry. Thus, this study aims to address three main research issues related to the banking industry in Yemen, specifically:

1. Whether reforms of the financial services sector have led to improvement in efficiency and productivity gains in Yemen banking industry.
2. Whether banks' efficiency in the banking industry in Yemen is determined by a set of microeconomic variables.
3. Whether the financial reforms have influenced the overall operational performance of Yemen banking industry.

This study adopts a non-parametric Data Envelopment Analysis (DEA) and Malmquist Productivity Index (MPI) to measure efficiency and productivity gains of banks in Yemen using financial and other information representing all local banks over a 16 year period from 1992 to 2007. Input and output variables are refined to represent the intermediation role of banks.

The estimated efficiency and productivity scores in intermediation models recorded a declining trend in efficiency, and show a negative trend in the first half of the study period from 1992 to 1997. However, in the second half of the study period, the mean efficiency scores of Yemeni banks shows some interesting evidences on the impact of financial and administration reforms in the financial sector. In terms of ownership, the findings show that foreign banks recorded a higher average efficiency than domestic banks and privately-owned banks recorded a relatively higher average efficiency than state-owned banks.

The enhanced independence given to boards of management under the globalization process has led not only to improved efficiency in Yemen banking industry, but also to the reduction of the efficiency gap between the state-owned banks and privately-owned banks. In the second part of first stage in estimating the MPI, the results show that even though banks in Yemen have invested for the advancement in communication and information technologies, no productivity gains have been achieved from improvement of efficiency. Nevertheless, the results show that Yemen banks have focused on improving the productivity process.

The analysis on determinants of technical efficiency in Yemen banking industry shows that technical efficiency has a positive relationship with variables such as profitability (Return on Assets), capital strength, liquidity, and assets quality. On the other hand, a negative relationship is shown with collateral value.

The last investigation used in this study is the application of CAMEL-S model to assess the influence of financial reforms on operational performance pre and post financial reform in Yemen banking industry. The results show that there is a significant improvement in the overall banking performance following the financial reform in Yemen banking industry.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KECEKAPAN, PRODUKTIVITI DAN PRESTASI KEWANGAN
DI INDUSTRI PERBANKAN YEMEN**

Oleh

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Sebelum tahun 1990, Yemen telah dibahagikan kepada dua bahagian: Republik Arab Yemen dan Republik Demokratik Rakyat Yemen. Di dalam bulan Mei 1990, kedua-dua bahagian tersebut telah bersatu untuk menjadi Republik Yemen. Pada permulaan tahun 1995, kerajaan Yemen telah memulakan pelan-pelan bercita-cita tinggi untuk mengreformasikan sektor-sektor kewangan dan pentadbiran di kesemua institusi ekonomi dengan meletakkan polisi-polisi kewangan sebagai asas kepada perkembangan industri perbankan di Yemen.

Sepanjang 19 tahun seterusnya, industri perbankan di Yemen telah menjalani beberapa siri perubahan menerusi reformasi kewangan, kemajuan di dalam teknologi komunikasi dan maklumat, globalisasi di dalam perkhidmatan kewangan, dan perkembangan ekonomi. Perubahan-perubahan ini seharusnya membawa kepada kesan yang ketara di dalam kecekapan, perubahan produktiviti, dan prestasi industri perbankan. Pengkajian ini dirangsang oleh penyiasatan empirikal tentang kesan perubahan-perubahan tersebut ke atas industri perbankan. Oleh itu, pengkajian ini bermatlamat untuk menangani tiga isu-isu kajian berhubungkait dengan industri perbankan di Yemen, khususnya:

1. Samada reformasi sektor perkhidmatan kewangan telah membawa kepada penambahbaikan di dalam kecekapan dan peningkatan produktiviti di industri perbankan Yemen.
2. Samada kecekapan bank di industri perbankan Yemen ditentukan oleh pembolehubah-pembolehubah ekonomi mikro.
3. Samada reformasi kewangan telah mempengaruhi prestasi cara kerja keseluruhan di industri perbankan Yemen.

Pengkajian ini menggunakan kaedah "non-parametric Data Envelopment Analysis (DEA)" dan "Malmquist Productivity Index (MPI)" untuk menyukat kecekapan dan peningkatan produktiviti bank-bank di Yemen dengan mengambilkira maklumat-maklumat kewangan kesemua bank-bank tempatan di sepanjang tempoh 16 tahun dari tahun 1992 hingga 2007. Pembolehubah-pembolehubah masukan dan keluaran dimurnikan untuk mewakili peranan bank-bank sebagai perantara.

Perhitungan kecekapan dan produktiviti yang dianggarkan di dalam model perantaraan merakamkan penurunan di dalam kecekapan, dan menunjukkan aliran negatif di sepanjang jangkamasa separuh pertama pengkajian ini dari tahun 1992 hingga 1997. Namun begitu, sepanjang jangkamasa separuh kedua pengkajian ini, perhitungan purata kecekapan bank-bank di Yemen menunjukkan beberapa bukti-bukti yang menarik terhadap kesan reformasi kewangan dan pentadbiran di dalam sektor kewangan. Di dalam perihal kepemilikan, penemuan ini menunjukkan bahawa bank-bank asing merakamkan purata kecekapan yang lebih tinggi berbanding dengan bank-bank tempatan, manakala bank-bank milik persendirian merakamkan purata kecekapan lebih tinggi berbanding dengan bank-bank milik kerajaan.

Peningkatan kebebasan yang diberikan kepada lembaga pengurusan menerusi proses globalisasi telah membawa bukan sahaja kepada peningkatan kecekapan industri perbankan di Yemen, tetapi juga telah membawa kepada penurunan jurang kecekapan di antara bank-bank milik kerajaan dan bank-bank milik persendirian. Di dalam bahagian kedua kepada peringkat pertama untuk anggaran MPI, keputusan menunjukkan bahawa walaupun bank-bank di Yemen telah melabur untuk perkembangan teknologi dan maklumat, tiada peningkatan produktiviti dicapai dari perkembangan kecekapan. Namun, begitu, keputusan menunjukkan bank-bank di Yemen telah memfokus untuk meningkatkan proses produktiviti.

Analisis faktor-faktor penentu untuk kecekapan teknikal di industri perbankan Yemen menunjukkan bahawa kecekapan teknikal mempunyai hubungan yang positif dengan pembolehubah-pembolehubah seperti keuntungan (Pulangan ke atas Aset), kekuatan modal, kecairan, dan kualiti aset. Manakala hubungan negatif direkodkan bagi pembolehubah nilai jaminan.

Penyiasatan ini diakhiri dengan mengaplikasikan model CAMEL-S untuk menilai pengaruh reformasi kewangan ke atas prestasi cara kerja sebelum dan selepas reformasi kewangan di industri perbankan Yemen. Keputusan menunjukkan terdapat penambahbaikan yang ketara ke atas keseluruhan prestasi bank selepas reformasi kewangan di industri perbankan Yemen.

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I certify that a Thesis Examination Committee has met on 29 October 2010 to conduct the final examination of Mohammed Ali Abdullah Maram on his thesis entitled "Efficiency, Productivity and Financial Performance in the Yemen Banking Industry" in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A1 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at University Putra Malaysia or at any other institution.

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Date: 29-October-2010

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